



York Pathology Associates

P.O. Box 4016 • 222 S. Herlong Avenue • Rock Hill, South Carolina 29732

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December 27, 2019

Daniel Matherly
4900 Whitmell School Road
Lot #4
Dry Fork, VA 24549

RE: Autopsy results on Lawrence Matherly
DOB: [REDACTED] 1965

Dear Daniel,

I have completed my autopsy on your late father, Lawrence Matherly. I have included a copy of the autopsy report with this letter for you to review. Please look over the autopsy report and do not hesitate to contact me with any additional questions.

In summary, your father had multiple conditions that I believe contributed to his death. At least four separate processes I believe interacted to cause his demise.

One of the most significant findings is partially based on the clinical information as relayed by the medical facility where he was treated. He presented to Southern Virginia Regional Medical Center where he was hypotensive with a low blood pressure of 73/50. His white count was markedly elevated at 48.3 and his lactic acid was also elevated, all findings suggesting an acute blood infection (sepsis). Although the blood cultures eventually were negative, I still believe his symptoms support sepsis. Second, he showed microscopic evidence of acute infection in his lungs (bronchopneumonia). These two different infections (sepsis and pneumonia) may be inter-related to one another.

The third finding involves his heart. Upon presentation to the facility, his troponin level was markedly elevated at 18.782. This protein indicates lack of blood supply to the heart and is usually elevated when someone is having a heart attack (myocardial infarction). Microscopic examination of his heart showed dying heart muscle indicative of a heart attack. Additionally, he had moderate to severe coronary artery disease which is the usual underlying cause of a heart attack. Additionally, he had calcium deposition in the small vessels of the heart which also likely contributed to lack of blood supply to the heart.

Fourth, the calcium deposition in the heart is likely secondary to the markedly elevated blood calcium level (your dad's calcium level was 20, while the upper limit of normal is 10.1). This elevated calcium level is secondary to primary hyperparathyroidism (enlargement of the parathyroid glands) which was found grossly and histologically in his parathyroid tissue.

Other findings of interest include an adrenal adenoma as well as fatty change of the liver. His skin also showed changes of psoriasis.

I hope this report has given you some closure and answered some of your questions. Again I am so sorry for your loss. Please accept my condolences.

Sincerely,

Robert E. Thomas, Jr., M.D.
Pathologist

RET/slb

Robert E. Thomas, Jr., M.D.
Pathologist

Craig F. Hart, M.D.
Pathologist

Roger W. Stone, M.D.
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AUTOPSY REPORT NUMBER: 19:AU174

DECEDENT: LAWRENCE MATHERLY

AGE: 54 YEAR OLD WHITE MALE

DATE OF BIRTH: [REDACTED] 1965

AUTOPSY AUTHORIZED BY: DANIEL MATHERLY, DECEDENT'S SON

DATE AND TIME OF DEATH: 10/13/2019, 2:18 A.M.

DATE AND TIME OF AUTOPSY: 10/19/2019, 2:00 P.M., PMC MORGUE

PROSECTOR: ROBERT E. THOMAS, JR, MD

PERSON(S) PRESENT: DAVID CHAMBERS

FINAL PATHOLOGIC DIAGNOSIS

I. SKIN

--PSORIASIFORM DERMATITIS CONSISTENT WITH PSORIASIS

II. HEART

--CARDIOMEGALY (420 GRAMS)

--MODERATE TO SEVERE CORONARY ARTERY DISEASE

--GLOBAL ISCHEMIA WITH CALCIUM DEPOSITION IN MICROVASCULATURE AND MICROABSCESS FORMATION

--MARKEDLY ELEVATED TROPONIN LEVEL (18.782 ng/mL)

III. LUNGS

--BILATERAL ACUTE BRONCHOPNEUMONIA

--PULMONARY EDEMA

IV. LIVER

--MODERATE TO SEVERE STEATOSIS

V. PARATHYROID

--BILATERAL HYPERPLASTIC PARATHYROID TISSUE (PRIMARY HYPERPARATHYROIDISM)

VI. ADRENALS

--LEFT ADRENAL WITH CORTICAL ADENOMA

VII. GASTROINTESTINAL TRACT
—CHRONIC ACTIVE GASTRITIS

VIII. MEDIASTINUM
—CALCIFIED/NECROTIC MEDIASTINAL LYMPH NODE

IX. CIRCULATORY SYSTEM
—SEPSIS/SEPTIC SHOCK
—ELEVATED LACTIC ACID 7.6 mmol/L
—LEUKOCYTOSIS (WHITE BLOOD COUNT 48.3)
—HYPOTENSION (BP 73/50)

HISTORICAL SUMMARY

The decedent was a 54 year old white male who was incarcerated at a prison in the state of Virginia. According to the family, the decedent started to feel sick on October 4, 2019. He requested permission to see a physician two days later and called family on October 7th. Another request was made by the decedent on October 8th for physician evaluation. Several additional calls were made between the decedent's family and the decedent and the decedent was eventually transported to Southern Virginia Regional Medical Center Emergency Department on October 12, 2019. He was evaluated for symptoms including shortness of breath where he was evaluated and found to be hypotensive with blood pressure of 73/50. He was admitted where a triple lumen catheter was placed. EKG was performed which revealed global ischemia. Attempts were made to transport the decedent to MCV as well as other higher level acuity care centers but ICU beds were not available. Workup included a working diagnosis of likely sepsis with septic shock as well as acute ischemic heart disease. Blood cultures, troponins, and other laboratory tests were ordered. The patient appeared to decline and x-rays revealed bilateral airspace disease possibly representing pneumonia. The decedent's lactic acid was markedly elevated at a level of 7.6. The decedent's troponin came back also at an elevated level of 18.782 ng/mL. The calcium was also noted to be elevated at a level of 20.7 (reference range 8.5-10.1). Other electrolytes were also abnormal. The decedent's white count was markedly elevated at a level of 48.3 (reference range 4.4-11.3). Blood cultures eventually returned with no growth. The decedent was in the process of being transferred to VCU Health in Richmond, Virginia, and suffered a cardiac arrest en route. Resuscitative efforts were initiated but were unsuccessful and the decedent was pronounced dead on October 13, 2019, at 2:18 a.m. A full autopsy was performed six days later at the Piedmont Medical Center Morgue in Rock Hill, South Carolina, at 2:00 p.m. at the request of the decedent's family to establish a cause of death and answer questions about his care.

EXTERNAL EXAMINATION

The body is that of a middle aged white male appearing his stated age of 54 years. The body weighs 173 pounds and measures 65 inches in height. The body is clothed in a single white sock on his left foot. An orange jumpsuit, white boxers, and a white T-shirt are in the body bag and have been previously cut off of the decedent. Personal effects are not found. The body is identified with an identification tag located around the right ankle as well as on the right wrist. Shackles are identified around the decedent's right and left ankles. Identifying marks and scars are not apparent. Evidence of medical therapy and/or emergency resuscitation includes an IV access line in the right antecubital fossa, an IV access line in the left proximal biceps region, a triple lumen port in the right inguinal area, a Foley catheter in the urethra.

The body build is average. The hair is brown, short and receding measuring approximately 3/4 of an inch in length at the crown. A beard and mustache are not present although the decedent is unshaven. The irises are blue in color. The eyes are slightly collapsed suggesting previous ocular fluid sampling. The pupils measure 5 mm in diameter. The conjunctivae are clear. The sclerae are clear. The nose and nasal orifices contain yellow-orange viscous fluid. The ears and external auditory canals are

unremarkable. The dentition is poor with no identifiable teeth. The neck is unremarkable. The chest is symmetric. The abdomen is flat. The genitalia appear to be uncircumcised. The anus is unremarkable. The back is unremarkable. The extremities are symmetric. All digits are present.

Rigor mortis is 0 to 1+ in the extremities and the jaw. Lividity is fixed on the posterior aspect of the body, except in areas exposed to pressure. The body is cool to touch.

There is a large 4 x 3 inch area of plaque-like scale formation on the anterior aspect of the decedent's left lower thigh region. Five additional small plaque-like thickenings of the skin measuring up to 1 inch in diameter are present on the anterior aspect of the right lower thigh region. Similar plaques are also present on the right and left elbow regions.

DESCRIPTION OF INJURIES

None.

DISPOSITION OF EVIDENCE

None.

INTERNAL EXAMINATION

The body is opened with a Y-shaped thoracoabdominal incision. All internal organs are in their normal anatomic position.

BODY CAVITIES: There is a small amount of serosanguineous fluid within the right and left pleural cavities (less than 50 cc's each). The pericardial and abdominal cavities are free of significant fluid accumulation.

NECK: The larynx is unremarkable. The thyroid is significant for a 3 cm nodule adjacent to the right lobe which has a uniform homogenous grayish-white cut surface. The left thyroid lobe has a 3 cm hemorrhagic nodule. The hyoid bone is unremarkable. No significant strap muscle hemorrhage is identified.

HEART: The heart weighs 420 grams. The pericardial surface is smooth and shiny. The coronaries have a normal distribution. There is a moderate to severe degree of cardiovascular disease, most prominently effecting the left anterior descending. The myocardium has a mottled light brown cut surface but no significant scarring is seen grossly. The left myocardial wall measures approximately 1.3 cm in thickness. The valves have the usual number of cusps/leaflets.

LUNGS: The right lung weighs 960 grams. The left lung weighs 930 grams. The pleural surface of each is pink red and smooth. The bronchi are free of obstructing material. The pulmonary vessels are free of thromboemboli. The cut surface of the lung parenchyma is red-brown, smooth and extensively edematous. No parenchymal lesions are identified.

LIVER: The liver weighs 1910 grams. The capsular surface is tan-yellow and smooth. The cut surface is smooth and homogeneous. No parenchymal lesions are identified. The gallbladder is present and contains a small amount of greenish black bile.

SPLEEN: The spleen weighs 230 grams. The capsular surface is slightly wrinkled. The cut surface is soft. No lesions are identified.

KIDNEYS: The right kidney weighs 230 grams. The left kidney weighs 220 grams. The cortical surface is smooth. The capsular surface strips with ease from the underlying cortex. The cortex is of normal thickness. The corticomedullary junction is well defined. The collecting system is unremarkable.

ADRENAL GLANDS: The right adrenal gland is of normal size. The left adrenal gland contains a 3.5 cm nodule suggestive of possible adenoma. The cortex and medulla are unremarkable.

GASTROINTESTINAL SYSTEM: The esophagus is unremarkable. The mucosa is gray-white and unremarkable. The stomach contains approximately 20 ounces of yellow-orange fluid. The mucosa is diffusely dark reddish brown and hemorrhagic appearing. It contains the normal rugal folds although these are somewhat blunted. The small intestine is unremarkable and contains a normal amount of soft fecal material. The appendix is identified. The large bowel contains a normal amount of soft fecal material proximally, while the fecal material distally is firm and impacted.

PANCREAS: The pancreas is yellow-orange and has a lobulated cut surface. No lesions are identified.

GENITOURINARY: The urinary bladder contains clear yellow urine. The prostate is unremarkable. The testes are descended.

BRAIN: The brain weighs 1360 grams. The cortical surface is unremarkable with a normal gyral and sulcal pattern. The cranial nerves are present and are unremarkable. The vascular supply is unremarkable. The cerebellum is unremarkable. The pons, midbrain, and medulla are normal. The meninges are thin and unremarkable. Sectioning the brain reveals a normal cortex. No intraparenchymal lesions are identified. No significant intracranial hemorrhage is identified.

MEDIASTINUM: There are several 1 to 2 cm paratracheal/mediastinal nodules which appear to represent calcified lymph nodes.

LABORATORY PROCEDURES: Blood and vitreous are drawn and retained.

BLOCK SUMMARY

- 1 – Skin plaques
- 2-4 – Heart, left posterior wall
- 5 – Heart, septum and right ventricle
- 6 – Left anterior descending coronary artery
- 7 – Circumflex coronary artery and right coronary artery (inked black)
- 8-9 – Lungs
- 10 – Liver, spleen, kidney, pancreas
- 11 – Adrenal gland, to include nodule
- 12 – Mediastinal lymph nodes, following decalcification
- 13 – Tissue in the area of the right thyroid lobe
- 14 – Tissue in the area of the left thyroid lobe
- 15-17 – Gastrointestinal tract
- 18 – Brain
- 19-22 – Additional sections of lungs

MICROSCOPIC DESCRIPTION

SKIN PLAQUES: Sections of the skin showing elevated plaques reveal psoriasiform hyperplasia consistent with psoriasis.

HEART: Sections of the myocardium reveal small scattered pockets of confluent acute inflammatory cells with associated necrotic myocytes. Smaller intermediate sized vessels show calcium deposition scattered throughout the myocardial tissue. Sections of the coronary arteries reveal moderate to severe atherosclerosis with occlusion ranging from 50 up to 85%.

LUNGS: Sections show a normal alveolar architecture. Acute inflammatory cells partially fill alveolar airways and are concentrated around intermediate to small bronchioles. The alveoli also contain prominent pulmonary edema fluid.

SPLEEN: Sections show congestion but are otherwise unremarkable.

KIDNEYS: Sections show prominent calcium deposition within renal tubules.

PANCREAS: Sections show autolysis.

LIVER: Sections show a mild to moderate steatosis.

ADRENAL GLAND: Sections of the left adrenal gland reveal a nodular expanse of cortical tissue consistent with adrenal cortical adenoma. The right adrenal gland is unremarkable.

MEDIASTINAL LYMPH NODES: Sections of the mediastinal lymph nodes show central necrosis and calcification. AFB and GMS stains are negative for organisms.

TISSUE ADJACENT TO THYROID: Sections of the tissue adjacent to the thyroid reveal extensive hypercellular parathyroid tissue.

GASTROINTESTINAL TRACT: Sections of the stomach reveal a chronic inactive gastritis. Sections of the large and small bowel show mucosal autolysis.

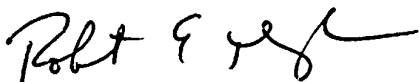
BRAIN: Unremarkable.

FINAL SUMMARY

The decedent was a 54 year old white male incarcerated in a prison in Virginia who, according to the family, began to feel sick around October 4, 2019. He made several requests, as did his family, for physician evaluation. He was eventually transferred to Southern Virginia Regional Medical Center for evaluation where he declined quickly and was worked up for acute myocardial infarction and/or sepsis/septic shock. Due to his critical nature, he was transferred to VCU for higher level acuity care. Unfortunately, he arrested en route and was unable to be resuscitated. A full autopsy was performed several days later in the Piedmont Medical Center morgue at the request of the decedent's son and legal next of kin.

Significant findings at autopsy included several plaque-like thickenings on his upper and lower extremities consistent with psoriasis, confirmed microscopically. Internal examination was significant for a moderate to severe degree of coronary atherosclerosis, most prominently affecting the left anterior descending coronary artery. Microscopic examination confirmed this impression and also showed calcium deposition in the microvasculature and confluent areas of microabscesses. Examination of the neck region revealed several 3 cm nodules, microscopically proven to be hyperplastic parathyroid tissue. Both lungs were markedly congested and consolidated and showed a significant amount of acute inflammation indicative of acute bilateral bronchopneumonia/bronchiolitis. The liver showed a mild to moderate degree of steatosis, while the stomach showed a chronic active gastritis. The left adrenal gland contained a 3.5 cm adrenal cortical adenoma, while both kidneys showed evidence of calcium deposition. Examination of mediastinal tissue revealed calcified lymph nodes.

After review of the decedent's medical history including treatment records at Southern Virginia Regional Medical Center, external examination, and internal autopsy examination, it is the opinion of the prosector that the decedent, Lawrence Matherly, died as a result of sepsis/septic shock complicated by global cardiac ischemia/myocardial infarction. These are also complicated by acute bilateral pneumonia and/or partially caused by primary hyperparathyroidism.



Robert E. Thomas, Jr., MD

12/27/19

Date